U8799

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This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation.

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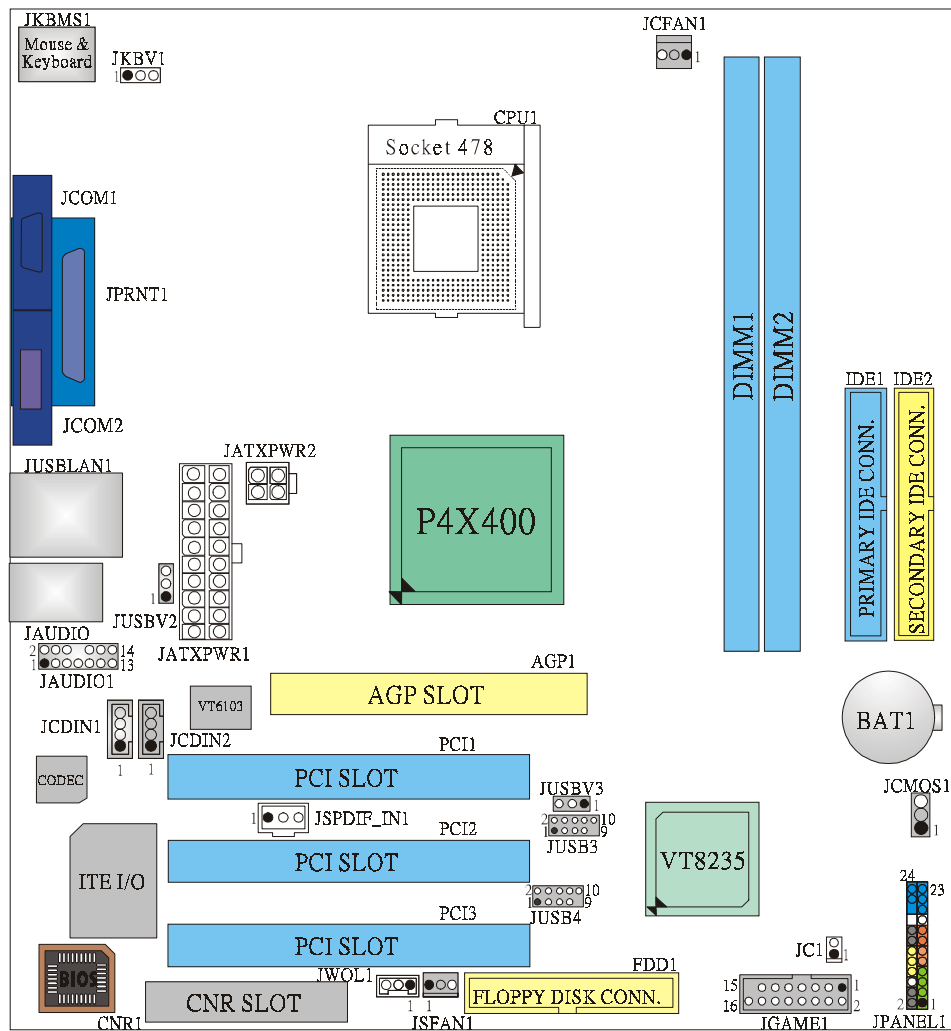Duplication of this publication, in part or in whole, is not allowed without first obtaining the vendor's approval in writing.

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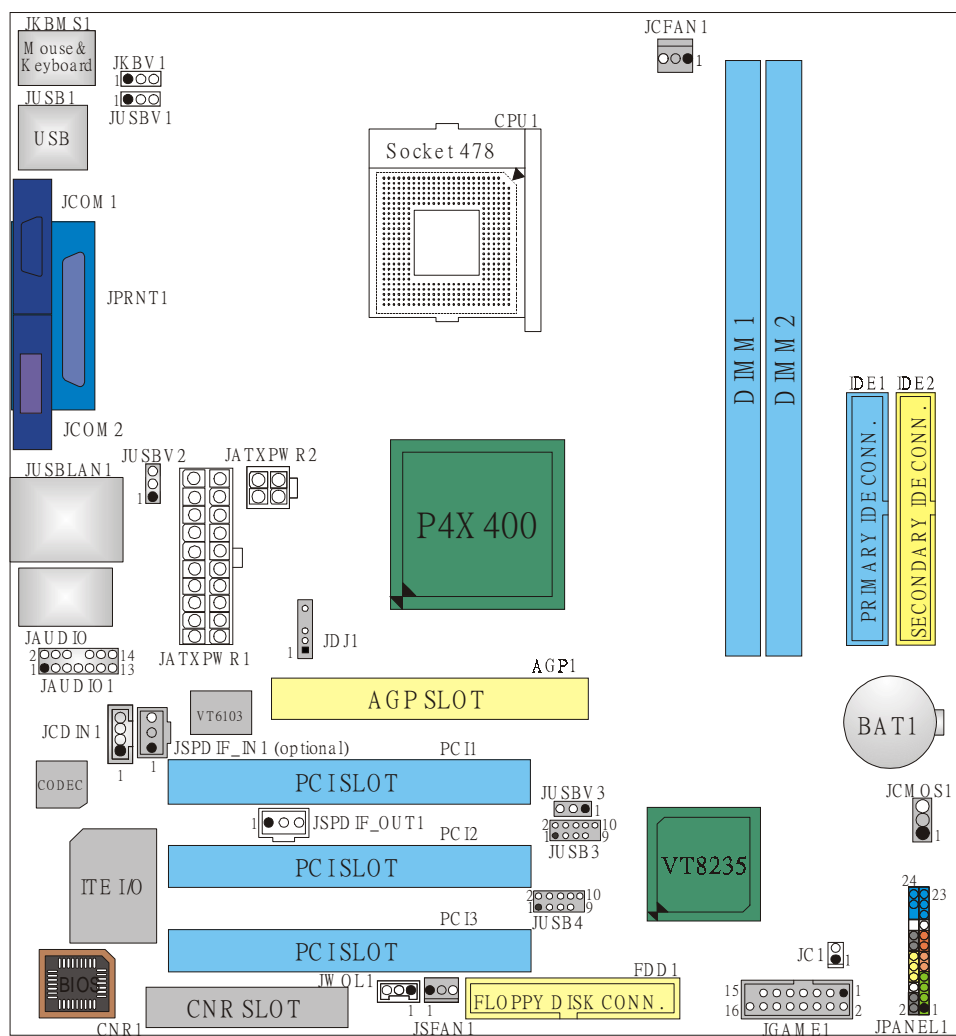
Content

Layout of U8799 for Version 3.1 and below

※ NOTE: ●represents the first pin.

Layout of U8799 Version 3.2

※　NOTE: ●represents the first pin.

English

U8799 Features

A. Hardware

CPU
- Provides Socket 478.
- Supports Intel® Pentium® 4 processor up to 3.06 GHz.
- Supports Hyper-Threading Technology.
- Front Side Bus at 400/533 MHz.

Chipset
- North Bridge: VIA P4X400.
- South Bridge: VIA VT8235.

Main Memory
- Supports up to 2 DDR devices.
- Supports 200/266/333/400 MHz DDR devices.
- Maximum memory size of 2GB.

Super I/O
- Chip: ITE IT8705.

Slots
- Three 32-bit PCI bus master slots.
- One AGP 4X/ 8X slot. (AGP 4X only supports 1.5v AGP electricals)
- One CNR slot.

On Board IDE
- Supports four IDE disk drives.
- Supports PIO Mode 0~4, Ultra DMA 33/66/100/133 Bus Master Mode.

LAN
- Chip: VIA VT6103.
- Supports 10 Mb/s and 100 Mb/s auto-negotiation
- Half/ Full duplex capability.

On Board AC'97 Sound Codec
- Chip: CMI9739A/CMI9761A (for v3.2 & above)
- Compliant with AC'97 specification.
- AC99 2.2 interface for CMI9739A/ AC99 2.3 interface for CMI9761A .
- Supports 6 channels.
- Supports stereo microphone. (for CMI9761A)

On Board Peripherals

a. Rear side

- 2 serial ports.
- 1 parallel port. (SPP/EPP/ECP mode)
- Audio ports in vertical position.
- 1 LAN jack.
- PS/2 mouse and PS/2 keyboard.
- 2 USB2.0 ports. (4 USB2.0 ports for v3.2)
- 1 vertical audio port.

b. Front Side

- 1 floppy port supports 2 FDDs with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes.
- 4 USB2.0 ports
- 1 front audio header.

Dimensions

- Micro ATX Form Factor: 24.5 X 22.5cm (W X L)

B. BIOS & Software

BIOS

- Award legal Bios.
- APM1.2.
- ACPI.
- USB Function.

Software

- Supports Warpspeeder^{TM}, 9th Touch^{TM}, FLASHER™, WinFlasher^{TM}.
- Offers the highest performance for Windows 98 SE, Windows 2000, Windows Me, Windows XP, SCO UNIX etc.

Package contents

- HDD Cable X 1
- FDD Cable X 1
- User's Manual X 1
- USB Cable X 1 (optional)
- Rear I/O Panel for Micro ATX Case X 1 (optional)
- Fully Setup Driver CD X1
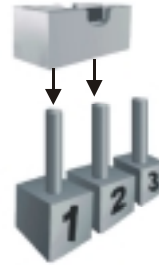
How to setup Jumper

The illustration shows how jumpers are setup. When the Jumper cap is placed on pins, the jumper is "**close**". If no jumper cap is placed on the pins, the jumper is "**open**". The illustration shows a 3-pin jumper whose pin 1and 2 are "**close**" when jumper cap is placed on these 2 pins.

Jumper close   Jumper open   Pin 1-2 close

CPU Installation

Step1: Pull the lever sideways away from the socket and then raise the lever up to a 90-degree angle.

Step2: Look for the white dot/cut edge. The white dot/cut edge should point towards the lever pivot. The CPU will fit only in the correct orientation.

Step3: Hold the CPU down firmly, and then close the lever.

Step4: Put the CPU fan on the CPU and buckle it. Connect the CPU fan power cable to the JCFAN1. This completes the installation.
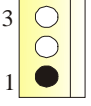
Step1   **Step2**   **Step3**   **Step4**

CPU Fan Header: JCFAN1

Pin No.	Assignment
1	Ground
2	+12V
3	FAN rpm Rate Sense

JCFAN1

System Fan Header: JSFAN1

Pin No.	Assignment
1	Ground
2	+12V
3	FAN rpm Rate Sense

JSFAN1

DDR DIMM Modules: DIMM1/ DIMM2

DRAM Access Time: 2.5V Unbuffered DDR 200/266/333/400 MHz Type required.

DRAM Type: 64MB/ 128MB/ 256MB/ 512MB/ 1GB DIMM Module (184 pin)

Total Memory Size with Unbuffered DIMMs

DIMM Socket Location	DDR Module	Total Memory Size (MB)
DIMMB1	64MB/128MB/256MB/512MB/1GB *1	Max is 2 GB
DIMMB2	64MB/128MB/256MB/512MB/1GB *1	

Only for reference

Installing DDR Module

1. Unlock a DIMM slot by pressing the retaining clips outward. Align a DIMM on the slot in the way that the notch on the DIMM matches the break on the slot.

2. Insert the DIMM firmly and vertically into the slot until the retaining chip snap back in place and the Dimm is properly seated.

Jumpers, Headers, Connectors & Slots

Floppy Disk Connector: FDD1
The motherboard provides a standard floppy disk connector that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types. This connector supports the provided floppy drive ribbon cables.

Hard Disk Connectors: IDE1/ IDE2
The motherboard has a 32-bit Enhanced PCI IDE Controller that provides PIO Mode 0~4, Bus Master, and Ultra DMA 33/ 66/ 100/ 133 functionality. It has two HDD connectors IDE1 (primary) and IDE2 (secondary).
The IDE connectors can connect a master and a slave drive, so you can connect up to four hard disk drives. The first hard drive should always be connected to IDE1.

Peripheral Component Interconnect Slots: PCI 1-3
This motherboard is equipped with 3 standard PCI slots. PCI stands for Peripheral Component Interconnect, and it is a bus standard for expansion cards. This PCI slot is designated as 32 bits.
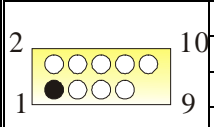
Accelerated Graphics Port Slot: AGP1
Your monitor will attach directly to that video card. This motherboard supports video cards for PCI slots, but it is also equipped with an Accelerated Graphics Port (AGP). An AGP card will take advantage of AGP technology for improved video efficiency and performance, especially with 3D graphics.
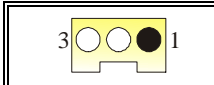
Communication Network Riser Slot: CNR1
The CNR specification is an open Industry Standard Architecture, and it defines a hardware scalable riser card interface, which supports modem only.

Front USB Header: JUSB3/ JUSB4

Pin	Assignment	Pin	Assignment
1	+5V(fused)	2	+5V(fused)
3	USBP4-	4	USBP5-
5	USBP4+	6	USBP5+
7	Ground	8	Ground
9	KEY	10	NA

JUSB3/4

Wake On LAN Header: JWOL1
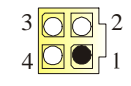
Pin	Assignment
1	+5V Standby
2	Ground
3	Wake up

JWOL1

Front Panel Connector: JPANEL1
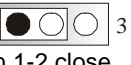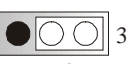
Pin	Assignment	Function	Pin	Assignment	Function
1	+5V	Speaker Connector	2	Sleep Control	Sleep Button
3	NA		4	Ground	
5	NA		6	NA	NA
7	Speaker		8	Power LED (+)	POWER LED
9	HDD LED (+)	Hard Drive LED	10	Power LED (+)	
11	HDD LED (-)		12	Power LED (-)	
13	Ground	Reset Button	14	Power Button	Power-on Button
15	Reset Control		16	Ground	
17	NA		18	KEY	
19	NA	IrDA Connector	20	KEY	IrDA Connector
21	+5V		22	Ground	
23	IRTX		24	IRRX	

Power Connectors: JATXPWR1/ JATXPWR2

JATXPWR1

PIN	Assignment	PIN	Assignment
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PS_ON
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	PW_OK	18	-5V
9	Standby Voltage +5V	19	+5V
10	+12V	20	+5V

	PIN	Assignment	PIN	Assignment
3 ⬚⬚ 2 4 ⬚⬛ 1 **JATXPWR2**	**1**	+12V	**3**	Ground
	2	+12V	**4**	Ground

Power Source Selection for Keyboard and Mouse: JKBV1
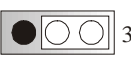
JKBV1	Assignment	Description
1 ⬛○○ 3 Pin 1-2 close	+5V	+5V for keyboard and mouse
1 ⬛○○ 3 Pin 2-3 close	+5V Standby Voltage	PS/2 Mouse and PS/2 Keyboard are powered with +5V standby voltage

Note: In order to support this function "Power-on the system via keyboard and mouse, "JKBV1" jumper cap should be placed on pin 2-3.
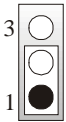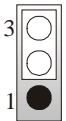
Case Open Connector: JC1

	Pin	Assignment
○ 1 ⬛ **JC1**	1	Case Open Signal
	2	Ground

Power Source Selection for USB: JUSBV1 /JUSBV2/ JUSBV3

JUSBV2/ JUSBV3	Assignment	Description
1 ⬛○○ 3 Pin 1-2 close	+5V	JUSBV2: 5V for USB located at the JUSBLAN1 port JUSBV3: 5V for USB located at the JUSB3/4 ports
1 ⬛○○ 3 Pin 2-3 close	+5V Standby Voltage	JUSBV2: JUSBLAN1 port powered with standby voltage of 5V JUSBV3: JUSB3/4 ports powered with standby voltage of 5V

Note: In order to support this function "Power-on the system via USB device", "JUSBV2/JUSBV3" jumper cap should be placed on pin 2-3 respectively.

Clear CMOS Jumper: JCMOS1

JCMOS1	Assignment
3 ◯ ◯ 1 ● Pin 1-2 Close	Normal Operation (default)
3 ◯ ◯ 1 ● Pin 2-3 Close	Clear CMOS Data

> **CAUTION**
> **WATCH YOUR STEP**
>
> The following procedures are for resetting the BIOS password. It is important to follow these instructions closely.
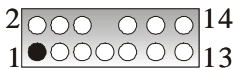
※ Clear CMOS Procedures:

1. Remove AC power line.
2. Set the jumper to "Pin 2-3 close".
3. Wait for five seconds.
4. Set the jumper to "Pin 1-2 close".
5. Power on AC.
6. Reset your desired password or clear the CMOS data.
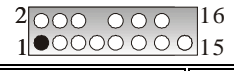
CD-ROM Audio-In Header: JCDIN1/ JCDIN2 (optional)

4 ◯ ◯ ◯ 1 ● **JCDIN1/ 2**	Pin	Assignment
	1	Left Channel Input
	2	Ground
	3	Ground
	4	Right Channel Input

Front Panel Audio Header: JAUDIO1

| 2 ○○○ ○ ○○ 14 | | | |
| 1 ●○○○○○○ 13 | | **JAUDIO1** | |

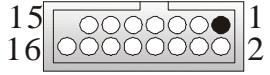| Pin	Assignment	Pin	Assignment
1	Mic In/ Center	2	Ground
3	Mic Power/ Bass	4	Audio Power
5	Right Line Out/ Right Speaker Out	6	Right Line Out/ Right Speaker Out
7	Reserved	8	Key
9	Left Line Out/ Left Speaker Out	10	Left Line Out/ Left Speaker Out
11	Right Line In/ Right Rear Speaker	12	Right Line In/ Right Rear Speaker
13	Left Line In/ Left Rear Speaker	14	Left Line In/ Left Rear Speaker

Front Panel Audio Header: JAUDIO1 (optional)

| 2 ○○○ ○○○ 16 | | | |
| 1 ●○○○○○○○ 15 | | **JAUDIO1** | |

Pin	Assignment	Pin	Assignment
1	Mic In/ Center	2	Ground
3	Mic Power/ Bass	4	Audio Power
5	Right Line Out/ Right Speaker Out	6	Right Line Out/ Right Speaker Out
7	Reserved	8	Key
9	Left Line Out/ Left Speaker Out	10	Left Line Out/ Left Speaker Out
11	Surrender Right	12	Surrender Left
13	Center	14	Subwoof
15	Ground	16	Key
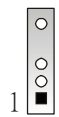
Digital Audio Connector: JSPDIF_OUT1/JSPDIF_IN1: optional

1 ● ○ ○ 3	Pin	Assignment
	1	+5V
JSPDIF_OUT1/	2	SPDIF_OUT
(JSPDIF_IN1)	3	Ground

Game Port Header: JGAME1

Pin	Assignment	Pin	Assignment
1	+5V	2	+5V
3	Joystick B Button 1	4	Joystick A Button 1
5	Joystick B Coordinate X	6	Joystick A Coordinate X
7	MIDI Output	8	Ground
9	Joystick B Coordinate Y	10	Ground
11	Joystick B Button 2	12	Joystick A Coordinate Y
13	MIDI Input	14	Joystick A Button 2
15	NA	16	+5V

AUDIO DJ Connector: JDJ1

PIN	Assignment	PIN	Assignment
1	SMBDATA	3	INT_B
2	SMBCLK	4	Key
5	ATX_PWROK		

Back Panel Connectors

6 Channel Speakers

Line In/ Rear Speaker

Speaker Out

Mic In/ Center & Bass
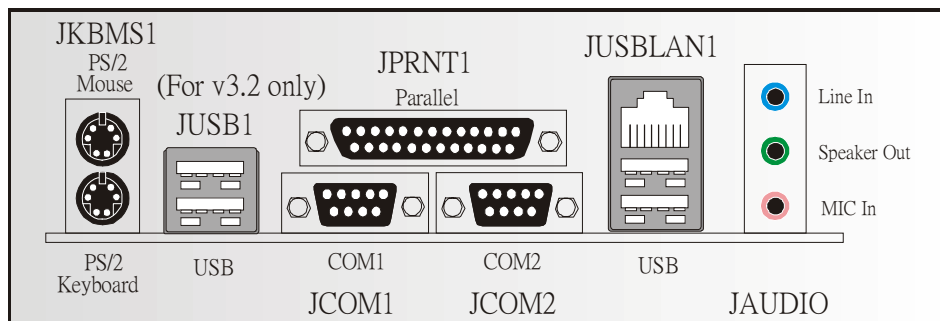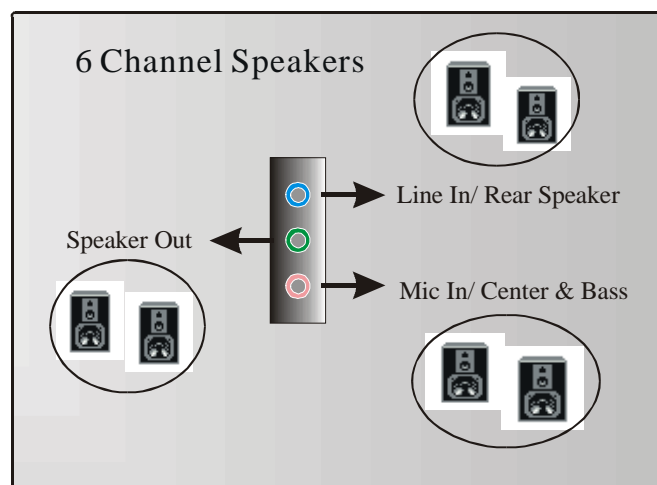
Français

Caractéristique de U8799

A. Matériel

Processeur
- Socket 478.
- Supporte processeur Intel® Pentium® 4.
- Supporte la technologie Hyper-Threading.
- FSB 400/ 533/ 800 MHz.

Jeu des Puces
- North Bridge: VIA P4X400.
- South Bridge: VIA VT8235.

Mémoire principale
- Prise en charge de deux périphériques 2 DDR.
- Prise en charge des périphériques DDR 200/266/333/400 MHz.
- Taille maximale de la mémoire :2Go.

Super E/S
- Puce: ITE IT8705.
- Interface de Comptage de Broche Faible.
- Offre la fonctionnalité Super E/S héritée la plus couramment utilisée.
- Initiatives de Contrôle d'Environnement,
  - Moniteur H/W
  - Fonction "Smart Guardian" de ITE

Slots
- Trois slots de maîtrise de bus PCI 32 bits.
- Un slot CNR.
- Un slot compatible AGP 4X/ 8X.

IDE intégré
- Supporte quatre lecteurs de disque IDE.
- Supporte PIO Mode 0~4 et Ultra DMA 33/66/100/ 133 Bus Master Mode.

LAN
- Puce: VIA VT6103.
- Supporte le fonctionnement en auto-négociation 10 Mb/s et 100 Mb/s.
- Capacité Half/ Full duplex.

Codec Son AC'97 intégré (seulement pour version au-dessous de 3.1)
- Puce: CMI9739A.
- Conforme aux spécifications AC'97.

■ Supporte 6 canaux.

Codec Son AC'97 intégré (seulement pour version au-dessus de 3.2)
■ Puce: CMI9761A.
■ Conforme aux spécifications Intel® AC'97 Rev 2.3.
■ Répond aux exigences de Microsoft® PC2001.
■ Supporte 6 canaux.
■ Supporte le microphone stéréo.
■ Gestion d'alimentation avancée et capacités d'économie d'énergie.

Périphériques intégré
a. Côté arrière
■ 2 ports série.
■ 1 port parallèle. (mode SPP/EPP/ECP)
■ 1 port audio en position verticale.
■ 1 port LAN.
■ 1 souris PS/2.
■ 1 clavier PS/2.
■ 4 ports USB2.0.

b. Côté frontal
■ 1 port disquette prenant en charge 2 FDD avec 360K, 720K, 1.2M, 1.44M et 2.88 Mo.
■ 4 ports USB2.0.
■ 1 connecteur front audio.

Dimensions
■ Facteur de Forme Micro ATX: 24.5 X 22.5cm (Larg X L)

B. BIOS & Software

BIOS
■ Award legal Bios.
■ APM1.2.
■ ACPI.
■ Fonction USB.

Logiciel
■ Supporte Warpspeeder™, 9th Touch™, FLASHER™, WinFlasher™.
■ Offrant la meilleure performance pour Windows 98 SE, Windows 2000, Windows Me, Windows XP, UNIX series, etc.

WarpSpeeder

Introduction

[WarpSpeeder™], a new powerful control utility, features three user-friendly functions including Overclock Manager, Overvoltage Manager, and Hardware Monitor.

With the Overclock Manager, users can easily adjust the frequency they prefer or they can get the best CPU performance with just one click. The Overvoltage Manager, on the other hand, helps to power up CPU core voltage and Memory voltage. The cool Hardware Monitor smartly indicates the temperatures, voltage and CPU fan speed as well as the chipset information. Also, in the About panel, you can get detail descriptions about BIOS model and chipsets. In addition, the frequency status of CPU, memory, AGP and PCI along with the CPU speed are synchronically shown on our main panel.

Moreover, to protect users' computer systems if the setting is not appropriate when testing and results in system fail or hang, [WarpSpeeder™] technology assures the system stability by automatically rebooting the computer and then restart to a speed that is either the original system speed or a suitable one.

System Requirement

OS Support: Windows 98 SE, Windows Me, Windows 2000, Windows XP

DirectX: DirectX 8.1 or above. (The Windows XP operating system includes DirectX 8.1. If you use Windows XP, you do not need to install DirectX 8.1.)

Installation

1. Execute the setup execution file, and then the following dialog will pop up. Please click "Next" button and follow the default procedure to install.
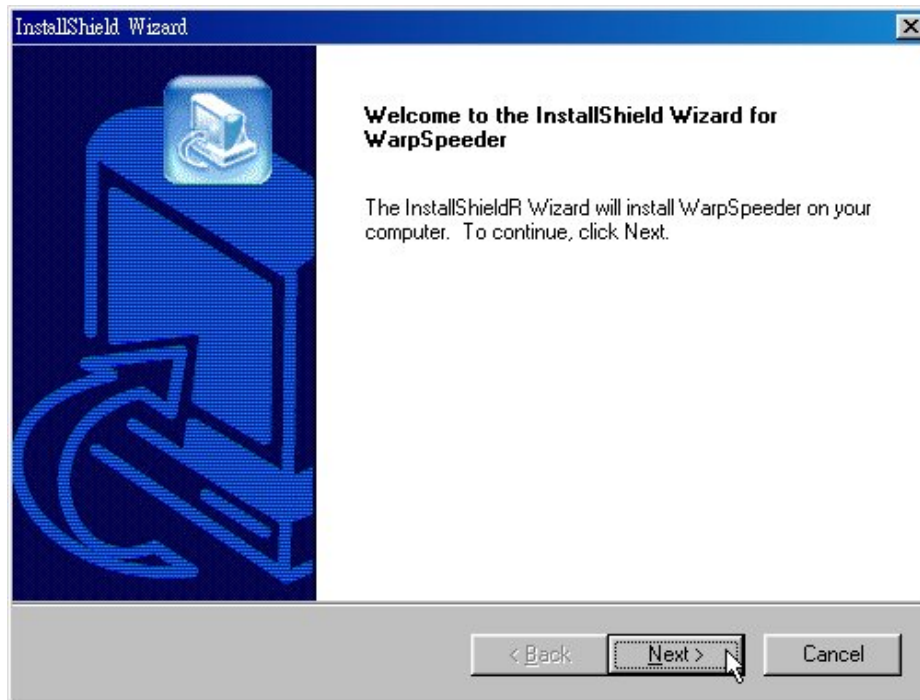
2. When you see the following dialog in setup procedure, it means setup is completed. If the "Launch the WarpSpeeder Tray Utility" checkbox is checked, the Tray Icon utility and [WarpSpeeder™] utility will be automatically and immediately launched after you click "Finish" button.
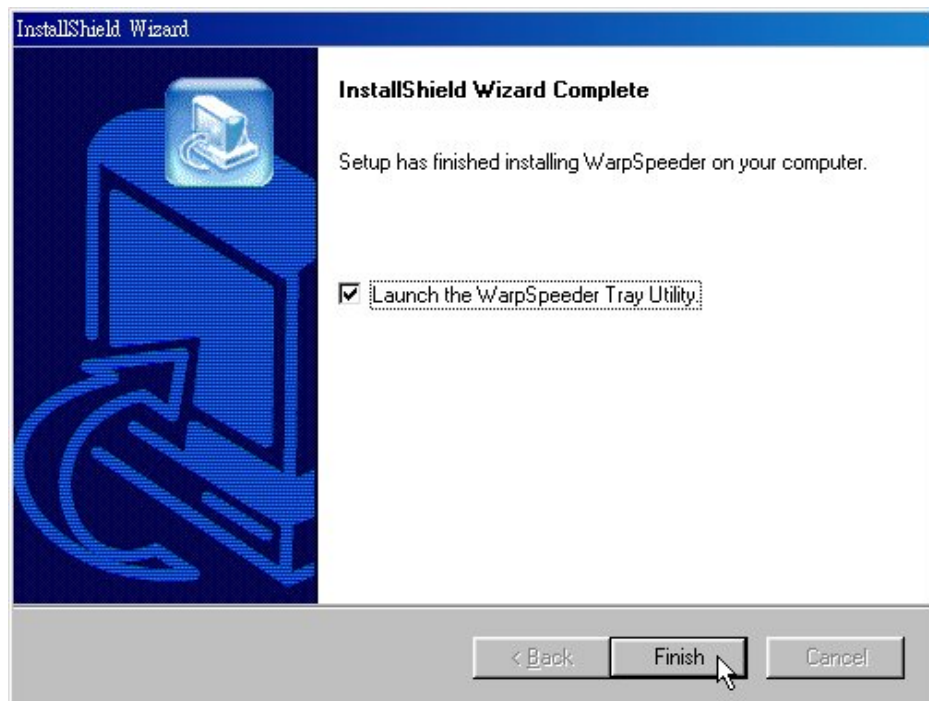
Usage

[WarpSpeeder™] includes 1 tray icon and 5 panels:

1.   Tray Icon:

Whenever the Tray Icon utility is launched, it will display a little tray icon on the right side of Windows Taskbar.

This utility is responsible for conveniently invoking [WarpSpeeder™] Utility. You can use the mouse by clicking the left button in order to invoke [WarpSpeeder™] directly from the little tray icon or you can right-click the little tray icon to pop up a popup menu as following figure. The "Launch Utility" item in the popup menu has the same function as mouse left-click on tray icon and "Exit" item will close Tray Icon utility if selected.
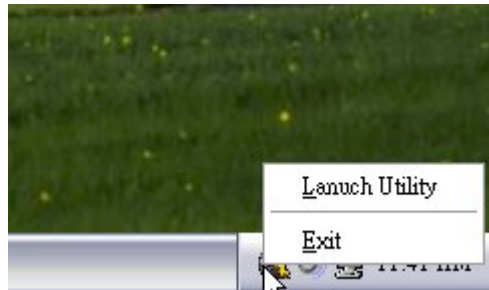
2. Main Panel

If you click the tray icon, [WarpSpeeder™] utility will be invoked. Please refer

do the following figure; the utility's first window you will see is Main Panel.

Main Panel contains features as follows:

a. Display the CPU Speed, CPU external clock, Memory clock, AGP clock, and PCI clock information.

b. Contains About, Voltage, Overclock, and Hardware Monitor Buttons for invoking respective panels.

c. With a user-friendly Status Animation, it can represent 3 overclock percentage stages:

Duck walking => overclock percentage from 100% ~ 110 %

Duck running => overclock percentage from 110% ~ 120%

Duck burning => overclock percentage from 120% ~ above
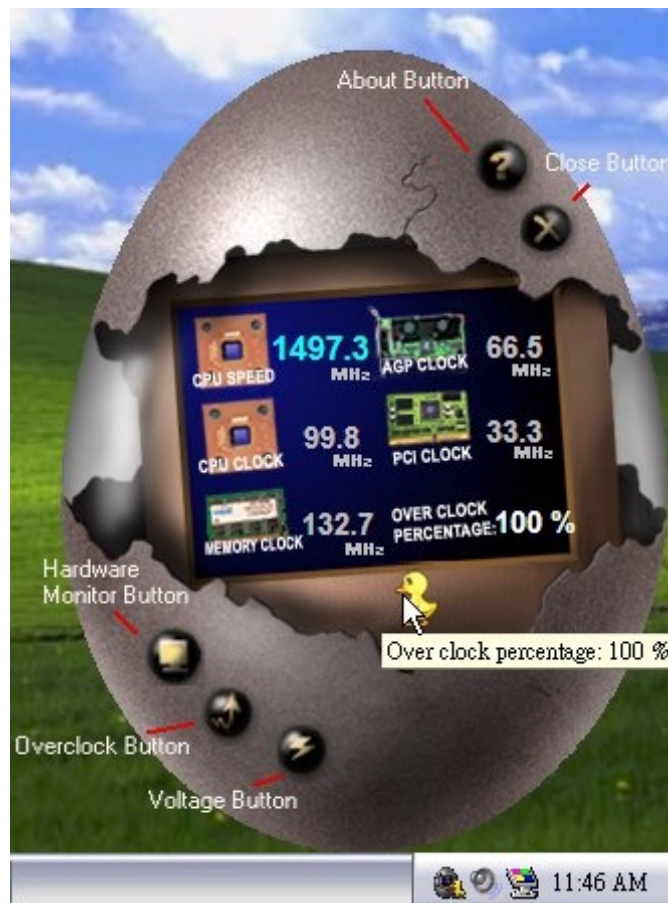
3. Voltage Panel

Click the Voltage button in Main Panel, the button will be highlighted and the Voltage Panel will slide out to up as the following figure.

In this panel, you can decide to increase CPU core voltage and Memory voltage or not. The default setting is "No". If you want to get the best performance of overclocking, we recommend you click the option "Yes".
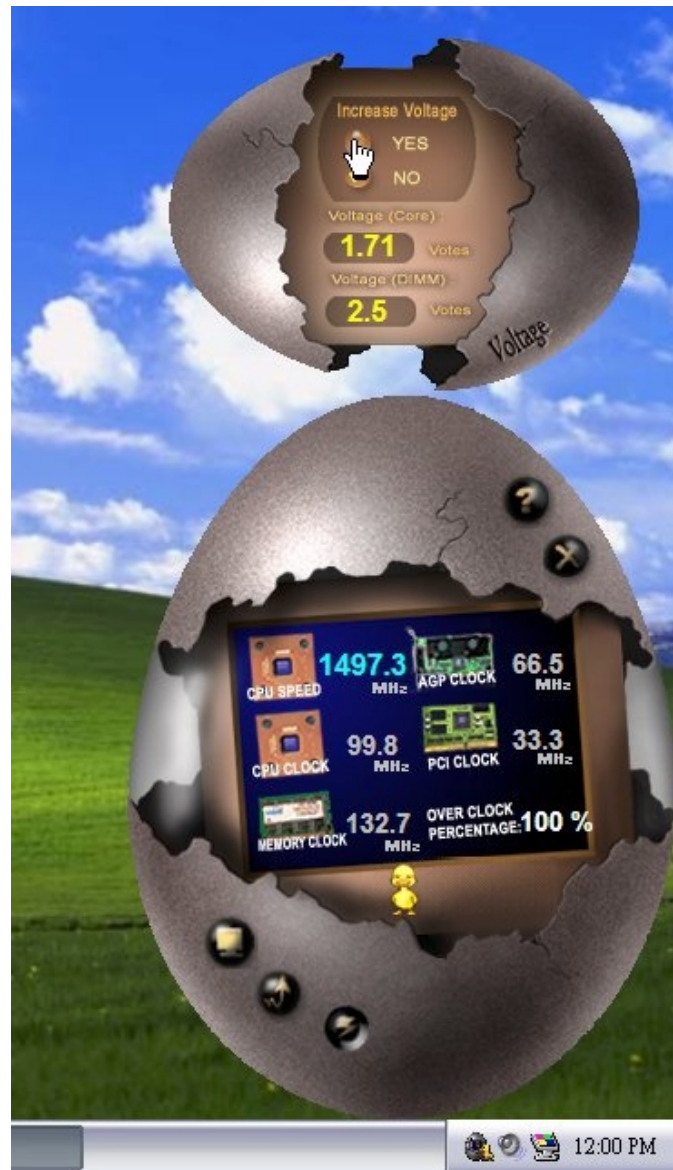
4.   Overclock Panel

Click the Overclock button in Main Panel, the button will be highlighted and the Overclock Panel will slide out to left as the following figure.

Overclock Panel contains these features:

a. "–3MHz button", "-1MHz button", "+1MHz button", and "+3MHz button": provide user the ability to do real-time overclock adjustment.

Warning: Manually overclock is potentially dangerous, especially when the overclocking percentage is over 110 %. We strongly recommend you verify every speed you overclock by click the Verify button. Or, you can just click Auto overclock button and let [WarpSpeeder™] automatically gets the best result for you.

b. "Recovery Dialog button": Pop up the following dialog. Let user select a restoring way if system need to do a fail-safe reboot.

Recovery Options

Please select a recovery option that will decide what kind of restoring you want to do after system fail-safe reboot.

Options Group

○ Restore to Hardware Default CPU Clock Value

◉ Restore to the Previous Verified CPU Clock Value

OK

c. "Auto-overclock button": User can click this button and [WarpSpeeder™] will set the best and stable performance and frequency automatically. [WarpSpeeder™] utility will execute a series of testing until system fail. Then system will do fail-safe reboot by using Watchdog function. After reboot, the [WarpSpeeder™] utility will restore to the hardware default setting or load the verified best and stable frequency according to the Recovery Dialog's setting.

d. "Verify button": User can click this button and [WarpSpeeder™] will proceed a testing for current frequency. If the testing is ok, then the current frequency will be saved into system registry. If the testing fail, system will do a fail-safe rebooting. After reboot, the [WarpSpeeder™] utility will restore to the hardware default setting or load the verified best and stable frequency according to the Recovery Dialog's setting.

Note: Because the testing programs, invoked in Auto-overclock and Verify, include DirectDraw, Direct3D and DirectShow tests, the DirectX 8.1 or newer runtime library is required. And please make sure your display card's color depth is High color (16 bit) or True color(24/32 bit) that is required for Direct3D rendering.

5. Hardware Monitor Panel

Click the Hardware Monitor button in Main Panel, the button will be highlighted and the Hardware Monitor panel will slide out to left as the following figure.
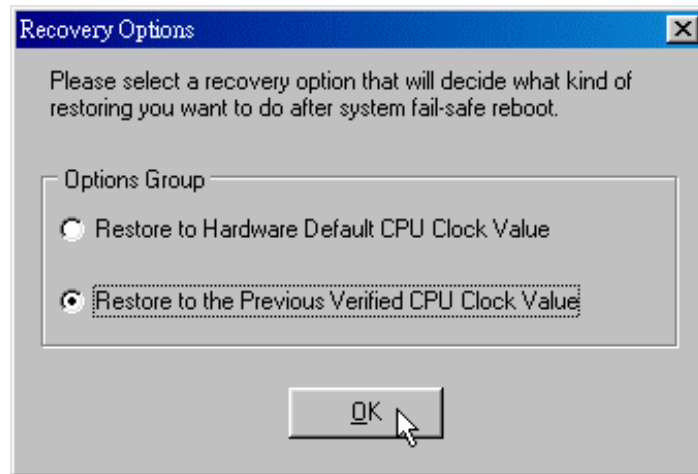
In this panel, you can get the real-time status information of your system. The information will be refreshed every 1 second.

6. About Panel

Click the About button in Main Panel, the button will be highlighted and the About Panel will slide out to up as the following figure.

In this panel, you can get model name and detail information in hints of all the chipset that are related to overclocking. You can also get the mainboard's BIOS model and the Version number of [WarpSpeeder™] utility.
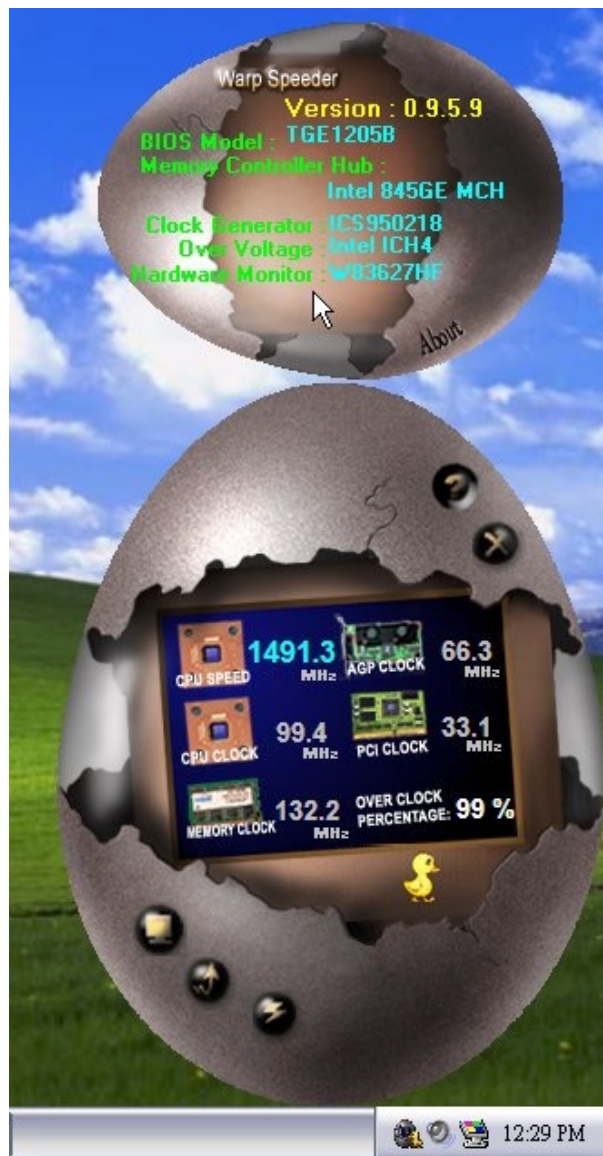
Note: Because the overclock, overvoltage, and hardware monitor features are controlled by several separate chipset, [WarpSpeeder™] divide these features to separate panels. If one chipset is not on board, the correlative button in Main panel will be disabled, but will not interfere other panels' functions. This property can make [WarpSpeeder™] utility more robust.

Trouble Shooting

PROBABLE	SOLUTION
No power to the system at all Power light don't illuminate, fan inside power supply does not turn on. Indicator light on keyboard does not turn on	* Make sure power cable is securely plugged in * Replace cable * Contact technical support

PROBABLE	SOLUTION
System inoperative. Keyboard lights are on, power indicator lights are lit, hard drive is spinning.	* Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.

PROBABLE	SOLUTION
System does not boot from hard disk drive, can be booted from CD-ROM drive.	* Check cable running from disk to disk controller board. Make sure both ends are securely plugged in; check the drive type in the standard CMOS setup. * Backing up the hard drive is extremely important. All hard disks are capable of breaking down at any time.

PROBABLE	SOLUTION
System only boots from CD-ROM. Hard disk can be read and applications can be used but booting from hard disk is impossible.	* Back up data and applications files. Reformat the hard drive. Re-install applications and data using backup disks.

PROBABLE	SOLUTION
Screen message says "Invalid Configuration" or "CMOS Failure."	* Review system's equipment . Make sure correct information is in setup.

PROBABLE	SOLUTION
Cannot boot system after installing second hard drive.	* Set master/slave jumpers correctly. * Run SETUP program and select correct drive types. Call drive manufacturers for compatibility with other drives.

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